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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/994,926	11/28/2001	Dong-Wook Roh	H1-0057	7269
34610	7590	06/14/2005	EXAMINER	
FLESHNER & KIM, LLP P.O. BOX 221200 CHANTILLY, VA 20153			PATHAK, SUDHANSHU C	
			ART UNIT	PAPER NUMBER
			2634	
DATE MAILED: 06/14/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/994,926

Applicant(s)

ROH, DONG-WOOK

Examiner

Sudhanshu C. Pathak

Art Unit

2634

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on November 28th, 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-22 is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on November 28th, 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

1. Claims 1-to-22 are pending in the application.

Specification

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

Corrective Action is required.

Applicant is reminded of the proper content of an abstract of the disclosure.

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

Corrective Action is required.

The abstract on line 5, discloses ".....via magnification of the initial matrix.....", however it would not be obvious (clear) to one of ordinary skill in the art at the time of the invention, as to how a matrix is magnified. Furthermore, no basic description is provided as to how the presented matrix manipulation (code generation) provides any utility.

Corrective Action is required.

The abstract of the disclosure is objected to because of the following informalities:

The abstract on line 2, discloses ".....generating an LS code....." it is not clear as to what this acronym refers to.

The abstract on line 10, discloses “.....length of an IFW as the same time.....” it is not clear as to what this acronym refers to and furthermore, the phrase should actually be “at the same time”.

Corrective Action is required.

3. The disclosure is objected to for the following informality:
The Specification on Page 4, line 22, discloses “.....an initial matrix 2x2.....” this should actually be “.....an initial 2x2 matrix.....”.

The Specification on Page 7, lines 7-8, discloses “.....the LS codes are divided into C and S components based upon ‘,’ or ‘comma’.....”, it is not clearly described as to what are the C and S components.

Corrective Action is required.

Drawings

4. The drawings are objected to because they fail to show, exactly how the LS codes shown are generated i.e. the drawings do no show the C and S components and the initial matrix, as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. **Corrected drawing sheets are required** in reply to the Office action to avoid abandonment of the application.

Claim Objections

5. Claims 1, 5 & 22 are objected to because of the following informalities:

Claim 1, on lines 5-6, discloses “.....an initial matrix 2x2.....”, this should actually be “.....an initial 2x2 matrix.....”.

Claim 1, on lines 13-14, discloses “.....arranging the second square matrix as a fourth quarter matrix of the third square matrix by multiplying all elements thereof with -1.....”, it is not clear if the fourth quarter of the third square matrix is multiplied by -1 or the whole third square matrix is multiplied by -1.

Claim 5, on line 1, discloses “.....the 2x2 initial matrix is.....”, this should actually be “.....the initial 2x2 matrix is.....”.

Claim 22, on line 3, discloses “.....an 2x2 initial matrix.....”, this should actually be “.....an initial 2x2 matrix.....”.

Appropriate corrections are required.

Allowable Subject Matter

6. Claims 1-22 are allowable over the prior art of record because the cited references do not contain the specified limitation of a method for generating orthogonal spread codes in a mobile communication system comprising the steps of: generating a first square matrix having a size of powers of 2 by operating an initial matrix 2x2; generating a second square matrix of same size of the first square matrix by operating the first square matrix; composing a third square matrix of double size of the first square matrix by arranging the first square matrix as a second quarter matrix and a third quarter matrix of the third square matrix, arranging the second square matrix as a first quarter matrix of the third square matrix, and arranging the second square matrix as a fourth quarter matrix of the third square matrix by multiplying all elements thereof with -1; making a deformed matrix by inserting a zero vector between a column or a row of the third square matrix ; and generating orthogonal spread codes for channel discrimination from the rows or columns of the deformed matrix.
7. This application is in condition for allowance except for the following formal matters as disclosed in the above Office Action

Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.

Conclusion

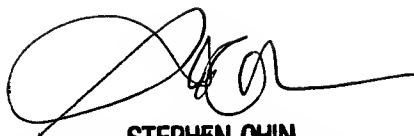
8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sudhanshu C. Pathak whose telephone number is (571)-272-3038. The examiner can normally be reached on M-F: 9am-6pm.

- If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on (571)-272-3056
- The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.
- Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sudhanshu C. Pathak

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Art Unit: 2634

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